Industry Sector Analysis JAPAN

INTERNET BROADCAST AND CONTENTS DISTRIBUTION

Mieko Muto 08/15/2000

TITLE: Internet Broadcast and Contents Distribution

SUBJECT COUNTRY(IES): JAPAN

POST OF ORIGIN: TOKYO

SERIES: INDUSTRY SECTOR ANALYSIS (ISA)

ITA INDUSTRY CODE: FLM, CSF, GSV,

DATE OF REPORT (YYMM): 0003

DELETION DATE (YYMM): 0203

AUTHOR: MIEKO MUTO

APPROVING OFFICER: FRANK CARRICO

OFFICER'S TITLE: COMMERCIAL ATTACHE

NUMBER OF PAGES: 11

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SUMMARY

With increase use of the internet for digital distribution, entertainment contents are broadcast over the net (live and canned stock) and the contents can also be distributed for sale via the internet. Although internet broadcasting in Japan is still in the embryonic phase, there is a strong possibility of attracting a widespread audience in Japan. Entrepreneurs are searching vigilantly for new business opportunities around internet broadcast services. Because of interactivity, and because the audience is not limited to locality or time zones, internet broadcast will attract increasing industry attention.

Japanese industry also believes strongly in the potential of electronic digital distribution, i.e. distribution of the "contents" over the internet, especially music. A few leading companies here have started experimental forays into the market and some of these experiments are experiencing rapid growth.

Although resolution and latency problems do exist, and although telecom charges are still quite high, the opportunities are virtually unlimited. This report provides information on the current situation of internet broadcast and on-line contents distribution in Japan in general (but with only passing reference to hardware and technological aspects). We hope that this may help U.S. companies find opportunities in Japan's emerging digital distribution market. END SUMMARY.

Exchange rate used in this report (100 yen = US \$1)

I. INTERNET BROADCASTING

MARKET HIGHLIGHTS

Internet broadcasting itself has been here for sometime. However, because rather complicated installation of software by the audience themselves was required, and because it was not easy to locate the programs, internet broadcast did not become popular until lately. In the past few years, technology has advanced remarkably; Microsoft's browser "Internet Explorer" offered audio format (radio tool bar), and MP3 and streaming technologies accelerated the growth.

Young people enjoy listening to music on-line while they are using their PC. There are nine Japanese internet radio broadcast stations and there are various websites which offer broadcasting programs (not only audio, but video and stock programs). In addition, Japanese public may access 500 or more foreign radio broadcasters worldwide.

New streaming and MP3 technologies have contributed greatly. With streaming technology, internet users may now listen to the contents and dispense with waiting for a long time in downloading to save/replay. Because the contents are thus not copied into end-users' PC, it ameliorated copyright problems.

The core of the attractiveness for internet broadcast is its interactivity: Internet, when integrated with TV, can greatly enhance enjoyment of the public.

Internet broadcast program access by audience in Japan (N=1,032 Source: Internet White Paper by Impress 1999)

Music	34%
Radio Talk	18
Sports (live)	17
Live by automatic camera	11%
News	10%
Festival, expo, interviews	5%
adult entertainment (porno)	3%
Chat and audience interactive	2%

Current Problems

At present, quality of pictures & sounds (by ordinary telephone lines) have to be improved, and the audience is very reluctant to pay for the contents they access. Internet broadcast require high bandwidth and broadband network, which cable lines for cable TV would far better be able to offer. CATV in Japan has been growing in the past decade. Diffusion rate of CATV reached 20% level (Cf. the rate in U.S. is nearly 70%) TCI is starting "@HOME" in Japan with Jupiter Telecom using cables and offer the high visual quality internet broadcast service.

Fees from ISPs are coming down, but telephone call charges are still considerably high. While many ISPs charge monthly flat fees at reasonable 2,000 yen (\$20) range, Japanese public is typically charged 10 yen per

minute for local calls during day time. This means nearly 100 yen (\$1) for listening to music for just 10 minutes or so. Comparisons of telephone charges internationally is not easy because of various discount packages, however, one survey by MPT indicates 2,090 yen as telecommunication charge (apart from internet access fees) for 15 hours per month of internet use in Tokyo versus 672 yen for the same hours in New York. Telecommunication charges in Japan keep coming down and difference becomes smaller every year.

Copyright has been (and still is) a big issue that internet broadcasting has to cope with. Japanese domestic internet broadcast started initially with radio live sports, news, stock market report, weather forecast, etc. which apparently involve little copyright complications. Industry worked to settle royalty issues, and a temporary agreement has reached between JASRAC and Network Ongaku Chosakuken RenrakuKyogikai in November 1998 in regard to royalty to copyright holders.

Amount that audience would be willing to pay for viewing/listening: (N=2,942 Source: Internet White Paper by Impress 1999)

Will not view at all if fee is to be charged 54.1% acceptable upto:

51-100 yen	(50c - \$1)	17.6%
201-500	(\$2 - \$5)	11.5
201-300	(\$2-\$3)	7.5
501-1,000		4.7%
11-50		3.4
1,500		0.6%
2,000		0.3
3,000		

Unsatisfactory aspects of internet broadcast (N=1,304) (multiple choice) (Source: "Internet White Paper '99" by Impress)

display size is small	27.9%
display quality is not good	25.2
sound quality not good	16.2
broadcast time (of the day) is not good	9.4
interactiveness is not utilized	5.2
broadcast time too short	4.6%
contents monotonous	3.9
broadcast time too long	1.2
other	2.3

COMPETITIVE ANALYSIS

U.S.Position

U.S. is the world leader in internet technology and services, and a few leading Japanese companies have entered the market via affiliation with U.S. companies.

Major players

Broadcast.com formed a joint venture with SoftBank and Yahoo Japan in January 1999. Sumitomo Shoji invested in @HOME Japan with Jupiter Telecom.

KDD (Japan's largest international telephone company) has formed a joint venture (J-Stream) with Real Networks (U.S.).

Nihon Digital Communication operates "HYPER-TV" (on demand service); "IMPRESS WATCH" is by a publisher, IMPRESS, which is well-known to this industry.

END USER ANALYSIS

PC household ownership in Japan in 1995 was 16.3%, but it is still growing rapidly. According to NRI's (Nomura Research Institute) most recent survey (on 2000 people), PC users who own and use PC at home reached 29.2% in early March 2000. This figure is translated as 25 million PC users from home. Growth is especially rapid in the higher age group and women.

Demography of PC Users (for personal use)

	December 1998	March 2000	
	19.1%		29.2%
<u>Males</u>			
10-19 yrs old	16.4%		30.8%
20-29	33.6		41.7
30-39	33.5		36.9
40-49	26.0		37.3
50-59	14.6		30.1
<u>Females</u>			
10-19	18.4		30.5%
20-29	18.2		35.0
30-39	14.7		27.5
40-49	12.8		20.7
50-59	4.5		11.2

Japan has second largest number of internet users. The ratio of internet users from home (personal use) doubled in the past 1.5 years, and at present, 16.7% of entire respondents said that they use internet on home PC that are hooked to internet. It is estimated that about 15 million people in the age bracket of 15-59 are hooked to internet as of March 2000. The ratio of female users have grown. In March, 41.5% of those who use internet via home PC were women. Average hours of use of internet users have been stable at around 13 hours/month throughout September 1998 to March 2000.

The increase of the ratio of internet users from home

September 1998	March 1999	October 1999	March 2000
8.0%	12.8%	13.5%	16.7%

Ratio of women internet users

March 1998 March 1999		March 2000	
23.8%	34.8%	41.5%	
N=105	N=158	N=236	
(15.4%	22.6%	31.8%	
	of women respondents)		

An important trend in Japanese internet market is the cell phone. Many young people access internet from their cell phones without the need to use a computer (at this moment, i-mode webpages are much simpler than that through PCs). NTT Docomo started this i-mode services in February 1999, and i-mode subscribers have reached 5 million in March 2000 only a year since then. It is expected to reach 10 million by the end of 2000. In

the NRI's survey, 9.9% of the entire respondents of 1,405 replied that they use internet via cell phone (inclusive of PHS). This 9.9% includes the connection of PCs to the cell phones. Of those 9.9%, about 40% use internet from their home PC as well.

II. ELECTRONIC DISTRIBUTION OF CONTENTS

Internet can be used for distribution of other digital contents (non-package product). Broadband will accelerate various "contents" to be distributed over the internet. While books are struggling in finding the way, music is off to a smoother start. In both cases, the platforms would more likely be mobile telecom devices rather than computers.

(1) Electronic books

A large scale experiment with electronic publishing started in November 1999 using satellite. It did not go well and will be ended at the end of March 2000. On the other hand, eight leading publishers, most of who have been members of that satellite experiment, are jointly starting on-line sales of digitized "paperbacks" over the internet in June 2000 (mostly fictions and classic literature). In the satellite experiment, in which not only publishers but also printing companies and electronic manufacturers participated, download took a long time, e.g. it took 9 minutes to download 10 MB contents of typical novels, and 20 minutes or more for comics and other contents containing pictures. Apart from contents, electronic book player itself weighed as much as 800g, too heavy for everyday carrying. In the new internet experiment, each of the eight publishers (i.e., Kobunsha, Kodansha, BungeiShunju, Shueisha, Shinchosha, ChuoKoronsha, Tokuma Shoten, and Kadokawa Shoten) will translate some 100 selected titles into digital data and sell the data in text data format on-line. The consumers may download the data in several minutes into their PCs. The data can then be played on their mobile telecom devices.

(2) Music

Electronic music distribution over the net started in 1998 and it has been growing to a real business when Sony Music Entertainment entered the market with much publicity. There are currently more than a dozen music sites from which consumers may downlaod and purchase music contents. Configurations of these webpages at present, however, are not user-friendly. Consumers have to do several clicking motions before they can actually start downloading to install software first. New attempts are being made to place specially designed terminals in retail shops (CD shops, convenience stores, etc.) from which shoppers, who do not have access to PCs, too, may download music with simpler operation at much faster speed (8 times faster).

Major players of electronic music distribution:

"bitmusic" by Sony Music Entertainment (SME) (http://bit.sonymusic.co.jp/SME started this business in December 1999. Through this website, SME sells all the titles (singles) the same day with their CD releases. This on-line music sales also serve as promotion for the music that SME markets in conventional format (CDs, etc.). Consumers download and save the data onto HD, and when payment is made (with either credit card, or new cyber cash, etc.), they will obtain "music key" necessary to play the music. The retail price will be 350 yen (about \$3.5) per title.

Yamaha started internet download business "midRadio." Yamaha's data can be installed and operate electronic musical instruments. Yamaha hopes that their on-line download business will help their musical instrument sales.

Sanyo Electric, another Japanese leading electric company, has started experiment in March 2000 with electronic music distribution through their new "Sound Boutique" stations. This experiment in 3 key cities are participated by other leading companies in music, broadcasting, publishing industries and will gauge opportunities not only for various contents but marketing methods (media mix). The retail price for music will be

200 yen (about \$2) per number for downloading onto a MD. This station has an "Import Boutique" in the same unit through which general public may enjoy personal imports of other tangible goods.

A few more music publishers who are starting similar distribution service within this year include Avex (/www.avexnet.or.jp.index2.htm) in April 2000: EZ music by Softbank is trying to offer download for only 100 yen per number, which industry believes, will end up in a substantial deficit. "music.co.jp" offers music for a price of 200 yen for one downlading ("music co.jp" also has 24-hour radio station in the same website.)

Nippon Columbia is developing an electronic music distribution system with Sega and Hitachi. The new system will involve a new DVD which has encoding, and it will be decoded on-line at the shop. They will work out the way to enable cash transactions for small fee collections from end-users.

At this moment, electronic music distribution is not commercially successful yet. However, if and when the problems are solved, this can quickly become a major channel for music business. And of course, the barrier is low for U.S. music companies to market their music via internet directly to Japanese consumers.

A problem common to all electronic music distribution sites at this moment is a long download time. It takes 19 minutes to download 5 min.30 second file (5.3MB) on ISDN line for PCs, which in turn would costs 60 yen, or 60 cents for the use of the telephone line for that length of time. NTT (Nippon Telegram and Telephone company) is developing new technology with which 3MB file may be downloaded in 3 minutes. Only a few of the electronic music distribution sites, if any, can recoup the costs at this moment. For leading companies, this is an investment for the future.

Electronic music distribution may be offered in conjunction with internet broadcasting. Mainichi broadcast (http://msb.co.jp/download/) started webradio early 1999; their electronic music distribution started in December 1999. The music aired on the radio on midnight Sunday may be downloaded on Monday. There is no charge during the experimental period. Nine thousand numbers were downloaded during the month of January 2000.

From "Song rite SHOW" at http://www.tv-tokyo.co.jp/ (10 PM on Fridays), audience may download the broadcast music right away. (services suspended March 7 through April 7)

III. MARKET ACCESS

Import Climate

As often pointed out, there is no border on the net. Many questions and problems would arise as the internet develops. A question arises what laws of which country should apply (and how the businesses on the net be taxed.) Urgent necessity of consumers and privacy protection on the internet have been recognized, and studies and discussions toward industry standards/legislation being conducted by several organizations.

Duties & Taxes

Consumption tax: 5%

10% withholding tax will apply to royalty remittances to USA.

There is no tariff on products under HS 85.24 (recorded media) for direct imports. Ministry Of Finance (MOF) is trying to impose consumption tax (5%) on contents products delivered on-line. MOF will target at the larger companies, but it will not be easy for them to collect information of on-line sales in which no tangible products go into physical distribution. Industry is skeptic about feasibility of taxation on electronic distribution, especially for international transactions.

Distribution/Business Practices

Collection would be cumbersome. Credit card companies do not like to handle small amount transactions (which will typically be 100-300 yen from consumers for this business); most high school students, the main patronage for music industries, do not have credit cards.

Fees for downloading via i-mode (cell phone with internet access) in general are 300 yen or lower. For i-mode platforms, NTT Docomo collects the fees on behalf of the contents providers by adding the fees for the contents to NTT's monthly cell phone bills. This method helps i-mode users to be less conscious about the download fees, but on the other hand, all the fees will have to be kept low since NTT Docomo is not willing to bear the risk of non-collectibles.

Best prospect

(1) Interactive features

The best advantage of internet broadcast is its interactive features. Internet broadcast is not to be limited to present radio/TV program-like one-way contents. "Internet Broadcast" can include "multicast" which is transmission of information to designated multiple users only and so it can be used for distribution of promotional tools for retail outlets, or it can provide low-cost on-line training. Internet broadcast does have expanded utilization.

(2) Services for mobile telecom devices as platforms

Internet broadcast via mobile platforms may become more attractive to walkman-bred generations who are addicts to mobile phones. Mobile phone market is growing with an annual increase of 10 million subscribers each year since 1996. It attracted overwhelming attention when i-mode service (internet accessible) users reached 5 million only several months after the start of the service. The number of i-mode users is expected to reach 10 million by the end of this year. Then, it will not take long before the i-mode users will exceed the number of current PC internet users who are at present estimated to be 15 million - 20 million. Of course, since the size of the display of cell phone is very small, visual broadcast will have difficulties, but cell phone will be the more popular medium for audio and contents distribution. Sony is starting music distribution through its i-mode webpage in July. With PHS, NTT Docomo together with Matsushita and other leading companies is starting experiments in April.

Mobile Phone Market Growth (a total of cell phone and PHS)

FY 1996 26.91 million subscribers

FY 1997 38.25 FY 1998 47.31

FY 1999 55.53* (as of end of Feb. 2000)

*out of 55.53 mil, cell phone accounts for 49.87 mil.

(Source: Outline of the Telecom Business in Japan 04/2000 MPT)

Popular Contents of mobile platforms as of Dec.1999

(of "short message service")

(multiple choice)

	have		ке
	already used	to use	
Weather forecast	14.6%		34.9%
News	12.9		31.8
fortune telling	9.4		22.2
sports info	8.3		24.3
train connection	7.0		32.4
games	6.4		20.2
gourmet	6.4		27.7
ticketing	3.7		40.1

mobile banking	3.6	27.5
stock market	2.6	19.1
board	2.6	20.9
credit card due amount	2.1	28.2
travel (reservation)	1.9	30.2
chat	1.6	20.9
other	2.3	11.0

(Source: Keitai Denwato ni okeru Short Message Service no RiyouDoko Chousa by Denshi Messaging Kyogikai)

(3) Services via Cable TV

In terms of number of platforms for internet access, mobile telecom devices(i-mode) may be the best prospect. However, in terms of the quality of the contents, especially for motion pictures, CATV should be the most promising vehicle because of its high speed broadband transmission. At the end of the year 1999, 9.49 million households were subscribers to urban type Cable TV in Japan (cable TV providing original programs). This was a 19.3% increase from the previous year. The diffusion rate has become 20.3% of total households in Japan. Cable TV operators are keen in providing not only the conventional TV broadcasting but also other services such as home security, home health care, internet, and so on ("full service"). At present, there are 145 Type I Telecommunications operators operating Cable TV. Of the 145, 136 are internet service providers and 100 (of the 136) have actually started internet services. Internet users via cable TV in March 2000 is 216,000. The number was only 32,000 just a year ago. Most cable TV ISPs offer monthly flat fee for internet use; The average charge was 4,923 yen (about \$49)/month in 1998. Cable TV is indeed an excellent infrastructure to provide high speed service internet accesses at reasonable costs. From the operators point of view, this internet service means a lucrative business vis-à-vis relatively low cost infrastructual investment. Therefore, development of internet services via cable TV will be accelerated.

Cable TV (urban Type) Subscribers (in millions)

	1993	1994	1995	1996	1997	1998	1999
	2.42	3.14	3.67	5.00	6.72	7.94	9.49
increase	29.5%	29.8%	15.7%	37.5%	34.4%	18.1%	19.6%
over previous	s year						

Internet Service Providers among Cable TV

	Mar	Jun	Sep	Dec	Apr	
	'99	'99	'99	'99	2000	
No. of Type I Carriers	63	81	90	120	145	
Internet Service Providers		49	69	78	106	136
ISP actually started service	32	52	57	69	100	

The Cable Internet Users

	<u>Mar 99</u>	Jun99	Sep 99	Dec 99	<u>Mar 2000</u>	(unit: million)
No. of users	3.2	6.6	9.2	15.4	21.6	

Source: Internet Setsuzoku Service no Riyoushasuuto Sokuho, MPT

TRADE OPPORTUNITIES

"ADVENT Audio Visual Entertainment" published by Advent Henshu-bu c/o CNW

3-9-15 Takanawa, Minato-ku, Tokyo 108-0074

Phone: 81-3-5420-2743 FAX: 81-3-5420-2744

"INTERNET" magazine published by IMPRESS 3-bancho 20, Chiyoda-ku, Tokyo 102

phone: 81-3-[

KEY CONTACTS

Ministry of Posts and Telecommunications 1-3-2 Kasumigaseki, Chiyoda-ku, Tokyo 100-8798 International Affaris Department

Phone: 81-3-3504-4200 FAX: 81-3-3592-9157

http://mpt.go.jp/index-e.html (English)

Ministry of International Trade and Industry (MITI) Information Systems Development Division Machinery and Information Industries Bureau 3-1 Kasumigaseki 1-chome, Chiyoda-ku, Tokyo 100

Tel: 81-3-3501-1511 Fax: 81-3-3501-6631

Internet Association of Japan (IAJ)

102-0075 3-bancho 20 Chiyoda-ku, Tokyo 102 phone: 81-3-5275-9270 FAX: 81-3-5275-2240

impress Group URL http://www.impress.co.jp/>

The National Association of Commercial Broadcasters in Japan

3-23 Kioi-cho, Chiyoda-ku, Tokyo 102-8577

Phone: 81-3-5213-7727 FAX: 81-3-5213-7730

Cable TV Association of Japan

7-13-6 Nishi-Gotanda, Shinagawa-ku, Tokyo 141

Phone: 81-3-3490-2022

FAX: 81-3-3490-2575

Japan Video Software Association (Nihon Eizo Soft Kyokai)

2-12-10 Tsukiji, Chuo-ku, Tokyo 104

Phone: 81-3-3542-4433 FAX: 81-3-3542-2535 Japan Electronics Industry Development Association (JEIDA)

3-5-8 Shibakoen, Minato-ku, Tokyo 105-0011

Phone: 81-3-3433-1922 FAX: 81-3-3433-6350

JASRAC

3-6-12 Uehara, Shibuya-ku, Tokyo

Phone: 81-3-3481-2121 FAX: 81-3-3481-2150

http://www.jasrac.or.jp/ejhp/index.htm (English)

SONY Music Entertainment

1-4 IchigayaTamachi, Shinjuku-ku, Tokyo 162-8715

Phone: 81-3-3266-5995

http://www.sme.co.jp (no English webpage)

Nippon Columbia

4-14-14 Akasaka, Minato-ku, Tokyo 107-8011

Phone: 81-3-3584-8111 FAX: 81-3-3584-5176

Sanyo Electric Co. Ltd.

2-5-5 Keihan-hondori, Moriguchi-shi, Osaka 570-8677

Phone: 81-6-6994-3605 Fax: 81-6-6991-6522

Contact: Mr. Michiya Matsushita

Broadcast.com

24-1 Nihonbashi-Hakozaki-cho, Chuo-ku, Tokyo, 103-0015

Phone: 81-3-5642-8030 FAX: 81-3-5641-1250

Homepage: http://www.bcast.co.jp/

Liquid Audio Japan

2-1-1 Nishi-Shinjuku, Shinjuku-ku, Tokyo 163-0430

Phone: 81-3-3342-1021 FAX: 81-3-3342-1031

APPENDIX A

URLs of current internet broadcast stations which has ".jp" domain. (taken from "Hosokyoku Joho: Site62" by IMPRESS.)

I. Music

abex internet radio WM, audio, Live, Stock

URL: http://www.avexnet.or.jp/radiobar/

MUSIC Watch Radio Real, Audio, Stock, WM

URL: http://www.watch.impress.co.jp/music/

Peter Barakan's Kitchen Sink Real, Audio, Stock

URL:http://www.music.co.jp/~rod/peterbarakan/japanese/kitchensinkP1j.html

MOOV Real, Video, Stock

URL: http://moov.infoweb.ne.jp/

NIFTYMUSIC WEB Real, Audio, Stock, Video

URL: http://www.nifty.ne.jp/musicweb/

JAME-Weekly Artist Channel Real, Audio, Stock, Video

URL: http://www.jame.or.jp/wac/

Loveradio Japan Real, Audio, Stock, WM, MP3

http://www.loveradio.cmo.ne.jp/

J-WAVE INTERNET BROADCAST WM, Audio, live, video, stock

URL: http://www.j-wave.co.jp/radiobar/

TOKYO FM 80.0MHz Radio Program on NET WM, audio, stock, videoURL: http://www.trm.co.jp/radiobar/

SHIBUYA-FM ON PARCO-CITY WM, audio, stock

URL: http://www.parco-city.co.jp/shibuya-fm/index_mp.html

RV-OKINAWA Real, audio, live, video, stock

URL: http://www.cosmos.ne.jp/shimauta/RV-OKINAWA/

Sony Music Online Japan Real, Audio, Stock, Video

URL: http://www.sme.co.jp/

Toshiba EMI To Make It! Real, Audio, Stock, Video

URL: http://www.toshiba-emi.co.jp/

PONY CANYON Real, Audio, Stock

URL: http://www.ponycanyon.co.jp/

music.denon.co.jp/ Real, Audio, Stock

URL: http://music.denon.co.jp/

PARADISE digital Real, Audio, Stock

URL: http://www.forlife.co.jp/

HAPPY SWING space site Real, Video, Stock

URL: http://www.glay.co.jp/

IIL

URL: http://radio.ne.jp/

B. Radio

Internet Radio (Bunka Hoso) WM, audio, stock

http://www.joqr.co.jp.radiobar/

@Ilnihtnippon.com Real, Audio, Live, WM, stock

http://www.allnightnippn.com

FM Yokohama 84.7 Real, Audio, Live, Video, Stock

http://www.fmyokohama,co.jp/

Shonan Beach FM 78.9 Real, audio, Live, video, stock

http://www.beachfm.co.kp/

FM Iruka Internt Hosokyoku http://www.hakodate.or.jp/iruka807

Web Radio 1179.am WM, audio, stock

http://www.mbs.co.jp/radio_bar/

TBS Radio 954 "Akasaka RaMeN" Wm, audio, stock

Radio DONTACOS Real, audio, stock

http://www.geocities.co.jp/Hollywood/1241/yourass.html

MotoWEbShow

http://www.moto.co.jp/Event/WSindex.html

3. Entertainment

Web Gendai Real, Audio, Stock, Video

http://kodansha.cplaza.ne.jp/

Sound Trekking real, audio, stock

http://enjoy.infoweb.ne.jp/s-trek/

Internet Radio real, audio, live, wm, stock

http://ccweb.mediagalaxy.ne.jp/

Ascii interneTV pasotele real, video, stock

http://itv.ascii,co.jp/bungaku.html

Internet On-demand Radio & Video K!S real, audio, live, video, stock

http://www.kis.or.jp/

Toshin Online real, video, live

http://www.toshin.ac.jp/

Station Gaia

http://www.nttdata.co.jp/profile/organ/public/ps/ps1_gaia.html

4. TV Program listing sites

TV Guide http://www.tvguide.or.jp/

InterTV http://intertv.or.jp/

Yahoo!Japan TV Coverage http://tv.yahoo.co.jp/intertv

Internet schedule http://netnavi.nikkeibp.co.jp/top/event/radiobar.shtml

5. Other

- Listing of internet broadcast sites http://www1a.mesh.ne.jp/necibs/
- StreamReminder (to preset not to miss specific stream broadcast programs)
 www.watch.impress.co.jp/streamR/

APPENDIX B

URLs of Tokyo key terrestrial stations

NHK (Nippon Hoso Kyokai) http://www.nhk.or.jp/

Nihon TV (NTV) http://www.ntv.co.jp/

Tokyo Hoso (TBS) http://www.tbs.co.jp/

Fuji TV http://www.fujitv.co.jp/
TV Asahi http://www.tv-asahi.co.jp/
TV Tokyo http://www.tv-tokyo.co.jp/

URLs of major radio stations in Tokyo

NHK (Hippon Hoso Kyokai) http://www.nhk.or.jp/

TBS Radio http://www.tbs.co.jp/radio/
Nippon Hoso http://www.fujisankei-g.co.jp/jolf/
Bunka Hoso http://www.joqr.co.jp/
Radio Nippon http://jorf1422. excite.co.jp/jorf1422/

TOKYO FM http://www.tfm.co.jp/

J-WAVE http://www.j-wave.co.jp/

Radio Tampa http://www.tampa.co.jp/

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